

also that of the summer bird. The winter plumage of the American species has yet to be determined; and from the appearance of change in my specimen, may it not prove that the two species are at this season closely approximated to each other? First specimen obtained April 9, 1846, the second a few days afterwards.

4. *Limosa melanura* (B.). In his Supplement Temminck states this bird to occur at Japan; its range is therefore very wide both to the north and south.

5. *Ardea comata* (B.). It is surprising that this beautiful species should not have occurred before in the island.

6. *Sterna Boysii* (B.), Sandwich Tern. As this has been recorded as an African bird, its appearance here only adds to its already very wide range.

7. *S. leucoptera*. As this bird is recorded by Temminck in his Supplement as common in Dalmatia, its appearance here is natural.

8. *Fuligula rufina* (B.), the Red-crested Pochard. As this species is already recorded amongst the birds of Italy, its appearance at Corfu was to be expected.

Incorporating therefore these birds into Capt. Drummond's list, the summary may be thus stated:—

	Species
Birds common to Ionian Islands and Great Britain	163
Doubtful if same as British species	2
Presumed to be British, though at first confounded with other species, and therefore rendered doubtful	1
European, but not British	48
Peculiar to Ionian Islands	1
New species founded by Capt. Drummond, and as yet only found in Albania	1
American species now first recorded as European	1

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In respect to the dates, as some were probably several days in the stuffer's hands before he brought them to me, whilst others were brought fresh, I may observe generally, that where the date is not given, it is to be understood that they were all obtained in the spring of the present year, prior to the month of May.

XXXI.—Descriptions of some newly discovered species of Araneidea. By JOHN BLACKWALL, F.L.S.

Tribe OCTONOCULINA.

Family THOMISIDÆ.

Genus THOMISUS, Walck.

1. *Thomisus incertus*.

Length of the male $\frac{1}{8}$ th of an inch; length of the cephalo-thorax $\frac{1}{14}$; breadth $\frac{1}{16}$; breadth of the abdomen $\frac{1}{16}$; length of a leg of the first pair $\frac{1}{6}$; length of a leg of the third pair $\frac{1}{8}$.

Eyes disposed on the anterior part of the cephalo-thorax in

two transverse, curved rows, forming a crescent whose convex side is in front; the lateral eyes, which are seated on a protuberance, are much larger than the intermediate ones, those of the anterior row being the largest of the eight. Cephalo-thorax convex, compressed before, truncated in front, abruptly sloping behind, without any indentation in the medial line; it is of a red-brown colour along the middle, with a broad brownish black band on each side comprising several irregular red-brown marks. Mandibles short, strong, subconical, vertical, dark brown tinged with red. Maxillæ convex near the base, enlarged where the palpi are inserted, pointed at the extremity, and inclined towards the lip, which is triangular: these parts are red-brown, the base of the lip being much the darkest. Sternum heart-shaped, with three dark brown spots on each side, and a streak of the same hue extending from its posterior extremity to the middle. Legs provided with hairs and sessile spines; the femora of the anterior pair are black, obscurely tinged with red on the sides and under part; the rest of these limbs is pale reddish brown, with the exception of a few dark spots on the sides of the genual joint and the base of the tibia; the second pair of legs resembles the first, except that the base of the femora is pale reddish brown; the third and fourth pairs are pale reddish brown with a few annuli of brownish black. First and second pairs of legs equal in length, the latter extending a little wider in consequence of being articulated to a broader part of the cephalo-thorax; third pair rather shorter than the fourth. Each tarsus is terminated by two curved, pectinated claws. Palpi short; the humeral joint is brownish black, palest at the base; the cubital and radial joints are reddish brown, obscurely marked with dark brown; the latter projects a long, brownish black, curved apophysis, which is recurved at the point, from its anterior extremity, on the outer side, and a reddish brown, crescent-shaped one on the under side; the digital joint is oval, dark brown, convex and hairy externally, concave within, comprising the palpal organs, which are highly developed, complicated in structure, with a black spine curved round their extremity, and are of a reddish brown colour. Abdomen depressed, corrugated, particularly on the sides, thinly covered with short strong hairs, broader at the posterior than at the anterior extremity, the latter, which appears as if cut in a straight line across, projecting over the base of the cephalo-thorax; its colour is dark brown, obscurely tinged with reddish brown; the sides are mottled with yellowish white, and the plates of the spiracles are dark reddish brown; on the upper part are five circular depressions; the three anterior ones are disposed in a triangle whose vertex is directed forwards, and the other two are situated parallel to its base.

My son, John Blackwall, discovered this spider in an outbuilding at Oakland in June 1845.

2. *Thomisus pallidus*.

Length of the female $\frac{1}{4}\frac{1}{8}$ ths of an inch ; length of the cephalo-thorax $\frac{1}{10}$; breadth $\frac{1}{11}$; breadth of the abdomen $\frac{1}{7}$; length of a leg of the second pair $\frac{1}{4}$; length of a leg of the third pair $\frac{5}{20}$.

Mandibles short, strong, subconical, vertical, furnished with some erect bristles in front, towards the inner side : maxillæ slender, convex near the base, pointed at the extremity, and inclined towards the lip, which is triangular : sternum heart-shaped : legs provided with short hairs and strong spines ; the first and second pairs are very decidedly longer and more robust than the third and fourth pairs, the second pair being rather the longest and the third pair the shortest : palpi short, provided with hairs and spines : these parts are of a pale yellowish brown colour, the lip being somewhat the darkest. Each tarsus is terminated by two curved, pectinated claws, and the palpi have a small, curved, pectinated claw at their extremity. Cephalo-thorax convex, compressed before, broadly rounded in front, depressed on the sides and at the posterior extremity, without any indentation in the medial line ; there is a row of strong bristles directed forwards on the frontal margin, and its colour is yellowish brown, palest on the lateral margins, with an obscure, longitudinal, reddish brown band directed backwards from each lateral pair of eyes. Eyes disposed on the anterior part of the cephalo-thorax in two curved rows, forming a crescent whose convex side is in front ; the lateral eyes, which are seated on a protuberance, are much larger than the intermediate ones, those of the anterior row being the largest of the eight. Abdomen depressed, corrugated, much broader at the posterior than at the anterior extremity, the latter, which appears as if cut in a straight line across, projecting over the base of the cephalo-thorax ; it is sparingly supplied with short strong hairs, and is of a pale yellowish brown colour ; on the upper part are five conspicuous circular depressions ; the three anterior ones form a triangle whose vertex is directed forwards, and the other two are situated parallel to its base. Sexual organs red-brown. Plates of the spiracles pale yellow.

Found among grass in a pasture at Oakland in September 1845.

This species, like *Thomisus cristatus*, *Thomisus bifasciatus*, and some others, has the power of changing the colour of the anterior intermediate pair of eyes from dark red-brown to pale golden yellow by a very perceptible internal motion. No such

motion appears to occur in the other eyes, which are always black.

3. *Thomisus trux*.

Length of the male $\frac{1}{7}$ th of an inch; length of the cephalo-thorax $\frac{1}{12}$; breadth $\frac{1}{14}$; breadth of the abdomen $\frac{1}{14}$; length of a leg of the second pair $\frac{1}{3}$; length of a leg of the third pair $\frac{1}{7}$.

Mandibles short, strong, subconical, vertical, of a dark brown colour with a red-brown spot in front. Maxillæ convex near the base, enlarged where the palpi are inserted, pointed at the extremity, and inclined towards the lip, which is triangular: these parts are brown. Sternum heart-shaped and yellowish brown. Legs robust, provided with hairs and spines; they are yellowish brown, with the exception of the femora, those of the first pair, the anterior half of those of the second pair, and the anterior extremity of those of the third and fourth pairs being brownish black faintly tinged with red; the first and second pairs are considerably longer than the third and fourth, the second pair being slightly the longest, and the third pair is the shortest of all. Each tarsus is terminated by two curved, pectinated claws. Palpi short; the humeral and digital joints are dark brown, the cubital joint is yellowish brown, and the radial reddish brown; the radial joint is much stronger than the cubital, and projects a slender, slightly curved, pointed apophysis from its outer side, which is very prominent, and an obtuse one on the under side, which has a process at its base, on the outer side; the digital joint is oval, convex and hairy externally, concave within, comprising the palpal organs; they are highly developed, complicated in structure, with a strong prominent point near the middle, a filiform spine curved from the outer side round the extremity and along the inner side, and are of a dark brown colour tinged with red. Cephalo-thorax convex, compressed before, truncated in front, abruptly sloping behind, with a very slight indentation in the medial line; the sides are black, comprising a longitudinal band of a clear red-brown colour, and a broad band of the latter hue extends along the middle. Eyes disposed on the anterior part of the cephalo-thorax, which is provided with a few strong black hairs directed forwards, in two transverse curved rows, forming a crescent whose convex side is in front; the lateral eyes, which are seated on a protuberance, are much larger than the intermediate ones, those of the anterior row being the largest of the eight. Abdomen depressed, corrugated, particularly on the sides, thinly covered with short strong hairs, broader at the posterior than at the anterior extremity, the latter, which appears as if cut in a straight line across, projecting over the base of the cephalo-thorax; it is yellowish brown above, encircled by a band of yellowish white; on each side of the medial

line is a broad, irregular, longitudinal band of a dark brown colour extending nearly to the spinners, immediately above which organs are several transverse yellowish white streaks; in the middle of the space comprised between the dark brown bands are two dark brown lines forming a very acute angle whose vertex is directed backwards, and in its anterior part are five circular yellowish brown depressions; three are disposed in a triangle whose vertex is directed forwards, and the other two are situated parallel to its base; the sides and under part are dark brown mottled with yellowish brown. Spinners and plates of the spiracles yellowish brown.

Captured in June 1846 among grass in a pasture at Oakland.

The males of several species of *Thomisi* so nearly resemble each other in size, general form and colour, that a careful inspection of the structure of their palpi and palpal organs is essential to their accurate discrimination.

Family LINYPHIIDÆ.

Genus LINYPHIA, Latr.

4. *Linyphia pulchella*.

Length of the male $\frac{1}{10}$ th of an inch; length of the cephalo-thorax $\frac{1}{20}$; breadth $\frac{1}{24}$; breadth of the abdomen $\frac{1}{20}$; length of an anterior leg $\frac{5}{24}$; length of a leg of the third pair $\frac{1}{6}$.

Cephalo-thorax oval, slightly compressed before, prominent in front where the eyes are seated, convex, glossy, with an indentation in the medial line of the posterior region; it is of a yellowish brown colour. Eyes disposed on black spots in two transverse rows; the four intermediate ones form a trapezoid whose anterior side is the shortest, the posterior pair being the largest, and the anterior pair the smallest of the eight; the eyes of each lateral pair are almost contiguous. Mandibles powerful, conical, armed with teeth on the inner surface, and inclined towards the sternum, which is broad and heart-shaped: maxillæ enlarged where the palpi are inserted; the exterior angle at their extremity is curvilinear, and they are inclined a little towards the lip, which is semicircular and prominent at the apex: these parts are reddish brown, the lip being the darkest. Legs moderately long, provided with hairs and slender spines; they are of a yellowish brown colour; first pair the longest, then the second, third pair the shortest. Each tarsus is terminated by three claws; the two superior ones are curved and pectinated, and the inferior one is inflected near its base. Palpi yellowish brown; the cubital and radial joints are short, the latter being much the stronger; the digital joint is oval, with a lobe on the outer side; it is convex and hairy externally, concave within, comprising the palpal or-

gans, which are very highly developed, very complicated in structure, and of a red-brown colour. Abdomen glossy, sparingly supplied with hairs, oviform, convex above, projecting over the base of the cephalo-thorax; upper part yellowish white, with a series of obscure, dark, angular lines, whose vertices are directed forward, extending along the middle, but least conspicuous on its anterior half; sides and under part pale yellowish brown. The plates of the spiracles are dark yellowish brown, and the transverse fold between them is prominent.

A male of this species was discovered among the grass of a pasture at Oakland in September 1845.

Family THERIDIIDÆ.

Genus THERIDION, Walck.

5. *Theridion versutum*.

Length of the male $\frac{1}{4}\frac{1}{8}$ ths of an inch; length of the cephalo-thorax $\frac{1}{9}$; breadth $\frac{1}{11}$; breadth of the abdomen $\frac{1}{10}$; length of an anterior leg $\frac{2}{3}$; length of a leg of the third pair $\frac{7}{10}$.

Cephalo-thorax oval, slightly compressed before, convex, glossy, having an indentation in the medial line: mandibles powerful, conical, vertical: both parts are brown faintly tinged with red. Maxillæ convex at the base, pointed at the extremity, and greatly inclined towards the lip, which is semicircular: sternum heart-shaped: these parts are brown tinged with yellow, the extremities of the maxillæ being yellowish white. Legs long and slender; they are provided with hairs and are of a pale yellowish brown colour; first pair the longest, then the fourth, third pair the shortest. Each tarsus is terminated by three claws; the two superior ones are curved and pectinated, and the inferior one is inflected near its base. The four intermediate eyes form a square, the two anterior ones, which are the darkest and rather the smallest of the eight, being placed on a prominence; the other four are disposed in pairs on the sides of the square, the eyes constituting each pair being contiguous and seated on a tubercle. Palpi pale yellowish brown; the radial is larger than the cubital joint and elongated on the outer side; this elongation is rounded at the extremity and applies very closely to the digital joint, which is oval, convex and hairy externally, concave within, comprising the palpal organs; they are moderately developed, complicated in structure, with a prominent process on the inner side, and a strong curved spine at the extremity, whose slender point is in contact with a delicate white membrane; their colour is reddish brown. Abdomen oviform, thinly covered with hairs, convex above, projecting over the base of the cephalo-thorax; the upper part is black with a large, white, crescent-shaped mark at

its anterior extremity, and three longitudinal rows of white spots, one on each side and the other extending along the middle, which diminish in size as they approach the spinners; the under part is yellowish white freckled with black, and the plates of the spiracles are pale yellow.

The spider described above was captured in the neighbourhood of Winchester in July 1846 by James Franklin Preston, Esq., of Plas Madoc, near Llanrwst, Denbighshire; and was comprised among specimens of *Araneidea* which that gentleman was so obliging as to collect for me in Hampshire and the Isle of Wight.

XXXII.—*The Birds of Calcutta, collected and described by*
CARL J. SUNDEVALL*.

[Continued from p. 261.]

32. *Gracula tristis*, Lath., Cuv.—*Pastor tristis*, Temm., Wagl. Rufo-grisea, capite lævi colloque nigris; ventre postico cum crisso, apicibus rectricum basique remigum late albis.

♂ ♀ similes. Sturno paullo major; ala 142 mill., tarsus 38, cauda 92; rostrum ab angulo oris 30. Lingua apice bifida, non lacera. Iris obscure rubra, circulo albo-punctato, circa pupillam. Vitta lata nuda, lutea e rostro per oculos. Rostrum et pedes tota lutea. Plumæ capitis longæ, acutæ, paullo erectiles. Alæ et cauda nigra. Alarum tectrices primariæ totæ, remiges posteriores longe ultra medium, albæ†. (Testiculi mense Martii parvi.)

This is one of the most numerous birds about Calcutta, and is stationary there. They live in great noisy crowds, which however do not form regular close flocks, but are continually assembled and dispersed or interchanged with others. In their mode of life they resemble both starlings and jackdaws; indeed they are quite like the latter when they walk upon the ground, nodding their heads at every step. The nests are always seen near grazing cattle. The flight is heavy, with a strong motion of the wings; but when they wish to stop, the wings are held still and expanded. The male is often seen to raise its tuft. In the morning and evening they sit in flocks on the trees, and make a fearful noise with their chattering voices, which sound like *tjati, tjati*, or *tjo-i*. No song was ever heard from them. They are not shy, and often come into the town. They eat chiefly rice, but often

* Translated from the 'Physiographiska Sällskapets Tidskrift' by H. E. Strickland, M.A.

† *Gracula fusca* e Java (*Pastor fuscus*, Wagl.) differt colore corporis obscure fusco; ala minus alba; vitta capitis nuda paullo minore, cauda brevior (75 mill.), rostroque paullo majore. De cæteris similis etiam dimensione.